

The Office Action, in paragraph 3, rejects claims 1, 3, 4 and 9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,922,988 to Yamaguchi et al. (hereinafter "Yamaguchi"). This rejection is respectfully traversed.

As discussed during the personal interview, Yamaguchi does not qualify as prior art under §102(b). Yamaguchi has a publication date of July 1, 2004. The instant application has an effective U.S. filing date of June 6, 2005. As such, the instant application was filed within one year from the publication of Yamaguchi. Thus, Yamaguchi does not qualify as prior art under §102(b). Solely to advance prosecution of this application, Applicants further traverse the rejections of the Office Action over Yamaguchi below.

The Office Action asserts that Yamaguchi teaches an exhaust emission control apparatus with features that allegedly correspond to the combinations of all of the features recited in independent claims 1 and 9. The analysis of the Office Action fails for at least the following reasons.

Yamaguchi does not teach, nor can it reasonably be considered to have suggested, (1) a detection device which detects a total concentration of sulfur oxide and hydrogen sulfide in exhaust gas that is passed through the NO_x storage reduction catalyst, and a concentration of the sulfur oxide, and (2) a concentration of the hydrogen sulfide obtained based on the total concentration and the concentration of the sulfur oxide that are detected by the detection device, as recited in claim 1. Claim 9 recites similar features.

For example, Yamaguchi does not disclose detecting a concentration of the sulfur oxide. As discussed in the Background of the specification, conventional control apparatuses are deficient, among other reasons, because the amount of SO_x released is not detected during the sulfur poisoning recovery process such that the process may be continued even in the absence of SO_x and/or excessively performed even when H₂S may no longer be in a reduction phase. The Office Action asserts that Yamaguchi teaches features that are considered to

correspond to this feature in claim 1, Fig. 1, col. 3, lines 15-30, and col. 13, line 66 - col. 14, line 10. With respect to these cited portions, however, Yamaguchi merely teaches an SO_x poisoning recovery section for recovering NO_x catalyst from its SO_x poisoning by supplying a reducing agent to vary oxygen concentration through the NO_x catalyst and a hydrogen sulfide concentration estimating section for estimating the concentration of hydrogen sulfide (claim 1). Yamaguchi further teaches that the amount of sulfur discharged from the NO_x catalyst 20 during recovery is estimated based on a bed temperature of the NO_x catalyst, the oxygen concentration of the exhaust and the duration time of a rich air-fuel ratio (col. 13, line 66 - col. 14, line 3). As discussed during the personal interview, estimating the amount of sulfur discharge from the NO_x catalyst based on a bed temperature of the NO_x catalyst cannot reasonably be considered to correspond to detecting the SO_x concentration in the exhaust, as recited in the pending claims.

As another example, Yamaguchi does not disclose a detection device which detects a total concentration of sulfur oxide and hydrogen sulfide in exhaust gas that is passed through the NO_x storage reduction catalyst, and a concentration of the sulfur oxide. As discussed above, Yamaguchi does not teach detecting the SO_x concentration, and the estimating of the SO_x concentration in Yamaguchi does not teach detecting the recited total concentration. In this regard, Yamaguchi merely teaches estimating the SO_x and hydrogen sulfide separately, and not detecting a total concentration of sulfur oxide and hydrogen sulfide in the exhaust gas, as recited in the pending claims.

During the March 12 personal interview. Applicants' representative presented the above arguments to the Examiner. The Examiner indicated that he would take these arguments into further consideration upon the filing of a formal response.

For at least the foregoing reasons, Yamaguchi does not teach the combinations of all of the features recited in claims 1 and 9. Additionally, claims 3 and 4 are also allowable for

at least the respective dependence of these claims, directly or indirectly, on an allowable base claim, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 3, 4 and 9 under 35 U.S.C. §102(b) as being anticipated by the applied reference are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3, 4 and 9, in addition to the indication of allowability regarding in claims 2 and 5-8, are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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